

C. Segment B - New Technologies Supporting Linkages
(2) Session B1- Linking Through a Common Understanding of the Battlespace
b. 2. Presentation Summary
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The Use of Advanced Distributed Simulation for Analysis

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Advanced Distributed Simulation, entity level simulation based on distributed interactive simulation and the evolving high level architecture technologies, has typically served as the simulation and stimulation tool supporting training applications. The Joint Countermine Operational Simulation (JCOS) project has as its objectives the use of ADS to support joint training as well as to conduct course of action analysis and the analysis of the “military utility” of a family of Army, Navy and Marine Corps countermine systems.

To use ADS to support analysis it is necessary to augment the usual visual output used in ADS training applications with an easily implementable experimental design and after action review system. The experimental design system, the JCOS exercise management and control system (EMCS), allows the user to more easily design the experiment and reproduce the design for repeatability in subsequent experimental trials. The JCOS after action review system (AARS) empowers the user to extract detailed performance metrics from the simulation results.

The JCOS EMCS provides a user friendly environment that gives the analyst the capability to quickly set up the experiment, defining the hardware and software configuration and the data gathering strategy within the ADS environment. The EMCS also stores the results of the simulation as well as the configuration information for comparison with subsequent experimental trials.

The JCOS AARS supports evaluation, analysis, and performance assessment. The AARS consists of several components that facilitate exercise preparation supporting training or analysis objectives, provide real-time monitoring and scanning with 2-D tactical map displays and 3-D “stealth” visualizations of the battlespace, compile exercise data, and permit statistical analysis using both established and customized measures of performance (MOPs) and measures of effectiveness (MOEs).

The data collection and analysis components of the AARS will consist of three major subsystems: a COTS relational database used as the primary AAR data repository; data logger/loader agents which will capture simulation network traffic, filter and parse the individual messages, stage relevant data at each site, and forward the data to the AARS repository; and a COTS World Wide Web (WWW) browser. The browser will provide the user with the capability to access the repository using stored and ad-hoc queries and download a variety of data directly to desktop applications such as spreadsheets and presentation graphics products.

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